

# USER MANUAL

## LED Flower 1x4

DMX-controlled RGBW 1-Cluster LED Effect

ENGLISH Page 2-12

■ Introduction

Dear customer,

congratulations on the purchase of this quality item and the trust having been put in us with this decision. To take full advantage of all possibilities and for your own safety and the safety of your environment, please read these operating instructions carefully before you start using the unit.

■ Security advice before use



**Warning:** Read this section carefully before installing, powering, operating, cleaning or servicing this product!

The following symbols are used to identify important safety information in this manual:



**DANGER!**  
Safety hazard. Risk of injury or death.



**WARNING!**  
Hazardous voltage. Risk of severe or fatal electric shock.



**WARNING!**  
Fire hazard.



**WARNING!**  
Read manual before installation and operation.



- General advice:**
1. Read this manual completely before using the product.
  2. Keep this manual in your records for future reference.
  3. Follow all instruction printed in this manual, otherwise warranty may be void.
  4. Follow all printed security advice on the product itself. The lighting flash with arrowhead within an equilateral triangle makes you aware of non-insulated AC mains voltage inside the unit. The exclamation mark within an equilateral triangle makes you aware of important operating and maintenance instructions in the literature attached to this product.
  5. Take care of enough distance between this product and sources of hum and noise like electric motors and transformers.
  6. Carry this product with greatest care. Punches, big forces and heavy vibration may damage this product mechanically.
  7. The manufacturer takes no responsibility for injury or damage caused by not following the safety precautions and instructions printed in this manual.

■ Maintenance

This unit does not need regular maintenance. The internal circuit is protected by a 250V/2A slow-blow fuse 5x20mm fuse. If this fuse fails, this usually indicates an internal fault requiring servicing by a qualified engineer. The fuse shall only be replaced by a fuse of same specification, and the replacement has to be made by qualified personnel obeying applicable safety rules.

■ Technical data LED Flower 1x4:

LEDs.....	180 pcs. 5mm LEDs (40 R, 40 G, 40 B, 60 W)
Mains Input.....	AC90-250V~ 50/60Hz
Power supply type.....	switch mode
Power Consumption.....	max. 20W
DMX connections.....	3 pin XLR (Male / Female)
Control protocol.....	DMX 512 (1990)
Dimensions (without bracket).....	LxWxH: 165x150x140mm
Weight .....	1.45kg

■ Standards

This product complies with the following standards:

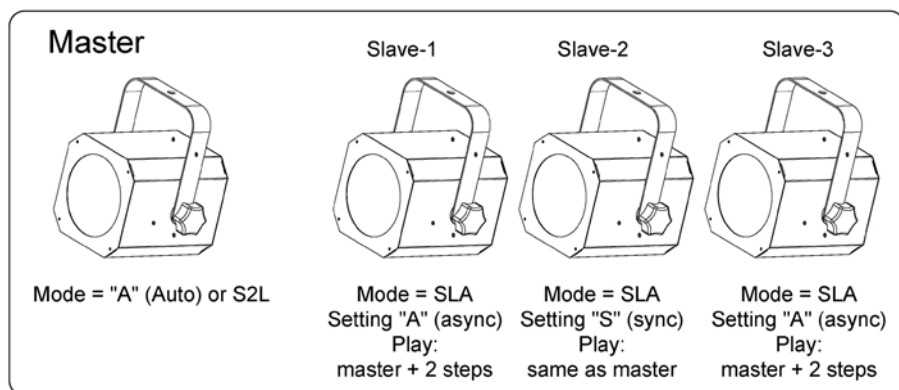
EU safety.....	EN60598-1:2008, EN60598-2-1:1989
EU EMC.....	EN55015: 2006 + A1:2007, EN61547:1995 + A1:2000
EU Harmonics .....	EN61000-3-2:2006
EU Flicker .....	EN61000-3-3:2008
US safety .....	UL60065
US EMC.....	FCC Part 15

This product meets both the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC.

## ■ Slave Operation

The LED Flower 1x4 has a sophisticated ability to not only generate a DMX signal equivalent to its own behaviour at its DMX output on channels 001...003, but also a DMX signal representing the same pattern that currently plays, but shifted by 2 pattern steps on channels 004...006. A connected slave unit can be either set to "synchronous" slave mode (setting "S" in menu "SLAVE"), then using the channels 001...003, or asynchronous slave mode (setting "A" in menu "SLAVE"), then using the channels 004...006.

For master/slave operation, also see the below example:



## Termination

To avoid interference the last unit of a DMX-chain should be terminated. Use a standard 120 Ohms XLR termination plug for DMX lines on the last device in a DMX bus chain.

## Switch on condition

The unit always returns to the last mode before it was switched off. In DMX Slave "SLA" or DMX Mode "d1"/"d3" all DMX values are cleared if power is switched off.

## DMX signal drop condition

The device will retain the status that it was in before the DMX signal got lost, but potential tact settings will be automatically cleared.



## Warning! Class 1M LED product.

1. Do not look into the beam from a distance of less than 40 cm (16 inches).
2. Do not stare into the beam for extended periods at a short distance.
3. Do not view the beam directly with optical instruments such as magnifiers.



## Protection from electric shock:

1. Do not connect the AC power plug to the unit before assembly has been completed.
2. Only connect this unit to a mains socket outlet with protective earth connection, ground-fault (earth-fault) protection and overload protection.
3. Where the mains plug or an appliance coupler is used as a disconnect device, the disconnect device shall remain readily operable.
4. To pull the AC Cord out of the wall outlet or the unit's AC socket, never pull the cable itself, but only the AC plug.
5. Disconnect the unit from AC supply by pulling the AC plug out of the wall outlet or the unit's AC socket before any kind of cleaning on the product. Use smooth and dry cloth only for cleaning. Check all connection cables before reconnecting the unit.
6. Do not expose this unit to any dripping or splashing liquids, and do not place objects filled with liquids, such as vases, on the unit. Do not operate this unit near to open water or in high humidity.
7. Choose the position of the AC cord according to the lowest risk of damage by foot steps or by squeezing it. Take especially care of the AC cord outlet on the unit as well as the AC plug and wall outlet at the other end of the cable.
8. Do not open the unit for service purpose, as there are no user-serviceable parts inside. Warranty will be void in any case of unauthorized service by the user or other not authorized persons.



## Protection from fire:

1. Take care of not placing the unit near sources of heat (e.g. powerful amplifiers, fog machines).
2. Allow at least about 6" (15cm) between this unit and other devices or a wall to allow for proper cooling.
3. Be sure this fixture is kept at least 0.5m away from any flammable materials (decoration etc.).
4. Do not stick filters, masks or other materials directly on the LEDs or the LED cover screen.
5. Take always care of sufficient air convection in the unit's environment to avoid overheating, especially when mounting in a closed environment. Make sure air convection slots are not

blocked. Do not operate this unit in environmental temperatures exceeding 35 degrees Celsius.

- Check the total maximum power of your AC wall outlet if you connect several units to one wall outlet and avoid any overloading.



#### Protection from injury and damage:

- Never use any accessories or modifications not authorized by the manufacturer of this unit.
- Choose a location for operation where the unit is protected from vibration and where a fixed mounting position is provided. In case of overhead-mounting, follow appropriate rigging rules and your country's regulations for rigging safety. See appendixes if any.
- Before plugging the AC cord in the wall outlet, check whether the AC mains voltage and frequency is the same as this product is specified for. Whenever your AC plug should not match the wall outlet, contact your dealer immediately.
- If fluids have spilled into the unit or small parts have intruded the unit, immediately switch off the unit and hand it over to the authorized service for a security check.
- Disconnect the unit from AC supply by pulling the AC plug out of the wall outlet or the unit's AC socket during a thunder-storm in order to avoid any damage on the unit due to AC voltage peaks.
- In case of not correct function of this unit or damaged AC cord or other damaged parts, pull immediately the AC plug out of the wall outlet and hand the unit over to the authorized service for a security check.
- To meet all aspects of functionality and security during maintenance work to be performed on this unit, all parts should be replaced by genuine spare parts. Consequently, take care of your dealer or maintenance company to be authorized by the manufacturer.

#### ■ Health advice

This unit produces and absorbs electromagnetic radiation. The strength of radiation and the sensitivity for disturbing interference matches the CE and FCC requirements. A corresponding sign is printed on the backside of the unit. Any change or modification may affect the behavior of the unit concerning electromagnetic radiation, with the CE requirements eventually not to be met any more. The manufacturer takes no responsibility in this case.

#### ■ Functional advice

This unit is immune to the presence of electromagnetic disturbances – both conducted and radiated - up to a certain level. Under peak conditions, the unit is classified to show a "class C" performance criteria and may encounter temporary degradation or loss of

#### "d1" Mode (DMX "Easy" Mode)

Press the MODE button (1) until the display shows "d1", indicating operation in "d1" (DMX Easy) mode. In alternation with displaying "d1", the display will show the DMX start address, which the user can change using the UP/DOWN buttons (2/3).

In this mode, the unit receives a DMX control signal on only one channel which is chosen as the start address, and mirrors the received data on the DMX output. Purpose of this mode is to allow simple basic remote settings for the user who is not familiar in-depth with DMX, but still would like to remotely enable or disable the unit and change the most vital operation parameters. The functional assignment to the receiving channel is as below:

CH1 DMX values:	000..014	Off
	015..059	Various patterns (9 patterns, low speed)
	060..104	Various patterns (9 patterns, medium speed)
	105..149	Various patterns (9 patterns, fast speed)
	150..199	10 pattern loop + Strobe (various speeds)
	200..249	Single pattern loop (10 patterns, sound-to-light)
	250..255	10 pattern loop (sound-to-light)

#### "d3" Mode (DMX "Full" Mode)

Press the MODE button (1) until the display shows "d3", indicating operation in "d3" (DMX Full) mode. In alternation with displaying "d3", the display will show the DMX start address, which the user can change using the UP/DOWN buttons (2/3).

In this mode, the unit receives a DMX control signal on a packet of three consecutive DMX channels, starting from the start address as set above, and mirrors the received data on the DMX output. Purpose of this mode is to allow more in-depth control for the discerning user who looks for specific effects. The functional assignment to the receiving channels is as below:

CH1 (Play):	000	All off
	001...148	Static Pictures
	149...150	All on
	151...249	Chase Patterns
	250...255	All pattern loop after 4 cycles
CH2 (Speed):	000	Static
	001...149	Speed 31...180 BPM (1 BPM steps)
	150...175	Sound-to-Light (1 step per 4 Beats)
	176...200	Sound-to-Light (1 step per 2 Beats)
	201...255	Sound-to-Light (1 step per 1 Beat)
CH3 (Strobe):	000...010	Strobe off
	011...255	Strobe 1Hz...23Hz

In “A” mode, the unit does not receive any values from the DMX input but runs through its own patterns and creates related DMX values on the output with channels 001 to 003 so that similar units can show the same chase pattern if they are connected by DMX and set to “Slave”. It further generates a second set of control signal on channels 004 to 006, which are shifted against the signal present on channels 001 to 003 by 2 pattern steps. See chapter “slave operation”.

If you leave mode “A” for any reason and come back later into mode “A”, the unit will recall the last chosen pattern speed (even if the unit was switched off in between).

### **“S2L” Mode (Sound-to-Light Mode)**

Press the MODE button (1) until the display shows “S2L”, indicating operation in “S2L” (Sound to Light) mode. In this mode, a sequence of different preset pictures is played, while the trigger to switch to the next picture is provided by external audio picked up by the internal microphone. In S2L mode, the UP/DOWN buttons (2/3) are disabled.

In “S2L” mode, the unit does not receive any values from the DMX input but runs through its own picture presets and creates related DMX values on the output with channels 001 to 003 so that similar units can show the same picture if they are connected by DMX and set to “Slave”. It further generates a second set of control signal on channels 004 to 006, which are shifted against the signal present on channels 001 to 003 by 2 steps. See chapter “slave operation”.

### **“SLA” Slave Mode**

Press the MODE button (1) until the display shows “SLA”, indicating operation in “SLA” (Slave) mode. In alternation with displaying “SLA”, the display will show either the letter “S” (for “synchronous”) or “A” (for “asynchronous”), while the user can change between these two setting using the UP/DOWN buttons (2/3). When being in “SLA” mode with setting “S” (synchronous), the unit will receive a control signal on DMX channel 001...003 (3 channels), while when being in “SLA” mode with setting “A” (asynchronous), the unit will receive a control signal on DMX channel 004...006 (3 channels).

Bearing in mind that any unit being in “A” or “S2L” mode acts as a master, and does not only generate its own played pattern as a DMX signal on channels 001...003, but also the same pattern with 2 steps shifted (see “slave operation”) on channels 004...006, then switching between setting “S” and “A” in slave mode allow the slave unit to either play in synchronisation (“S”) or shifted against the master (“A”).

function which may need manual help to recover. In such case, disconnect the AC power from the unit and reconnect it again to recover.

### **■ Environmental advice**



This unit is built to conform to the ROHS standards and the WEEE directive 2002/96/EC of the European Parliament and of the Council of the European Union. Under these regulations, the product shall not be discarded into regular garbage at the end of its life, but shall be returned to authorized recycling stations.

### **■ Unpacking**

Please check that the box contains the following items:

Main parts:	1 pcs. LED Flower 1x4 main unit
	1 pcs. mains cable
	1 pcs. operation manual

If any part is missing, please contact your dealer immediately for replacement.

### **■ Getting started: choosing a location**



**Risk of fire:** The LED Flower 1x4 has been designed to work in dry indoor environments at environmental temperatures up to 35 degrees Celsius. For proper operation, the unit must be operated with unobstructed air convection to its outside metal case.

### **Do not:**

- Operate the LED Flower 1x4 in environments with more than 35 degrees environmental temperature or more than 75% relative humidity.
- Operate the LED Flower 1x4 in any closed environment smaller than 10cbm, unless forced air convection is provided.

### **■ Getting started: making AC supply connections**



#### **Risk of fire / Safety risk**

The LED Flower 1x4 has an AC outlet that is designed to carry loads of no more than 8A. Do not connect any high-power devices such as audio power amplifiers, fog machines etc. to this outlet. Make sure that all connected devices in a chain fed by the first device do not exceed a maximum of 8A current consumption. All units must be properly and separately earthed.

## ■ Getting started: secure mounting

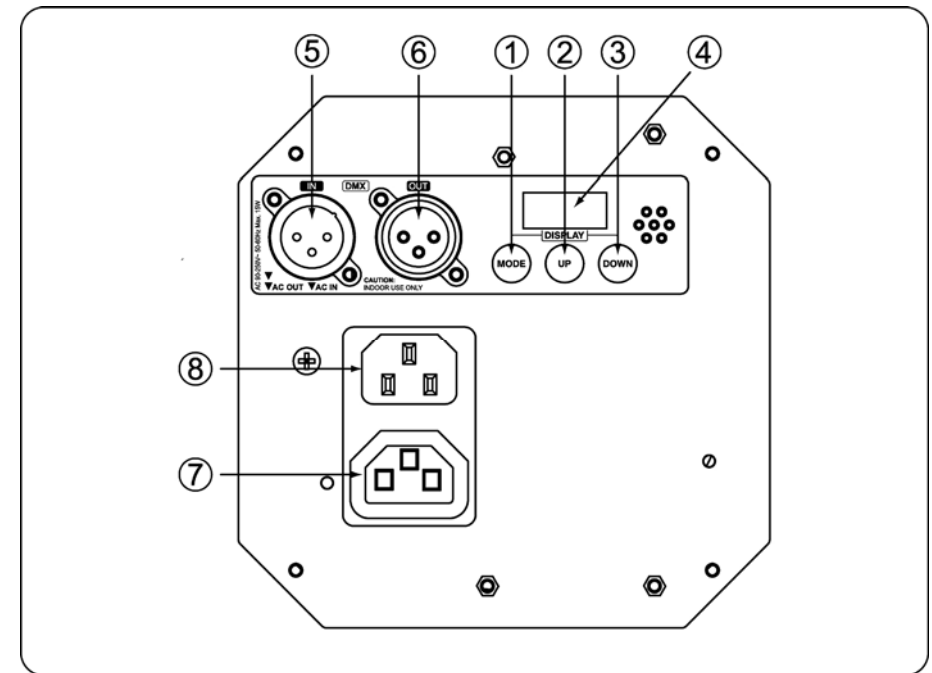
### Hanging/Rigging, ceiling-mounted operation



**Risk of injury:** Overhead mounting requires extensive experience, including among others calculating working load limits, good knowledge of the installation material being used, and periodic safety inspection of all installation material and the unit. If you lack such qualifications, do not attempt the installation yourself. Improper installation can result in body injury. Be sure to complete all rigging and installation procedures before applying power to the unit.

- The unit should be installed out of reach of people and outside areas where persons may walk by or be seated.
- Make sure that the installation area can hold a minimum point load of 10 times the device's weight.
- In fixed installations, fix the unit with self-locking screws/nuts to the mounting point.
- When mounting the unit to truss be sure to secure an appropriately rated clamp to the hanging yoke using a M10 screw fitted through the center hole of the hanging yoke.
- Where required, secure the installation with an appropriate safety cable. Always use a certified safety cable that can hold 12 times the weight of the device when installing the unit. This secondary safety attachment should be installed in a way that no part of the installation can drop more than 20cm if the main attachment fails.
- Never stand directly below the device when mounting, removing, or servicing the fixture. Make sure the area below the installation place is free from unwanted persons during rigging, de-rigging and servicing.
- The operator has to make sure that the safety-relating and machine-technical installations are approved by an expert before using them for the first time. The installations should be inspected every year by a skilled person to be sure that safety is still granted.
- Make sure to comply with cooling requirements of the used power supply if any.

## ■ General Operation



### User interface overview:

- 1 MODE selection button
- 2 UP-Button
- 3 DOWN-Button
- 4 Display showing the Mode, DMX-address, etc.
- 5 DMX input
- 6 DMX output
- 7 AC output
- 8 AC input

Upon the user's choice, the unit can work stand-alone or may be controlled by external DMX-controllers. Available modes:

### “A” Mode (Auto / DMX Master)

Press the MODE button (1) until the first digit on the display show “A”, indicating operation in “A” mode. In this mode, a varied preset pattern is replayed, for which the replay speed can be set in ten steps by means of the UP (2) and DOWN (3) buttons.